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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,274	09/24/2003	Christopher C. Toly	SIMU0008	9373

7590 03/16/2006

LAW OFFICES OF RONALD M. ANDERSON
Suite 507
600 - 108th Avenue N.E.
Bellevue, WA 98004

EXAMINER

CHENG, JOE H

ART UNIT PAPER NUMBER

3715

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,274

Applicant(s)

TOLY, CHRISTOPHER C.

Examiner

Joe H. Cheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-26 and 49-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-26 and 49-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In response to the Preliminary Amendment filed on September 20, 2004, claims 1-23 and 27-48 have been cancelled, and claims 24-26 and the newly added claims 49-92 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 50-59 and 72-87 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The antecedent basis for the “digital imaging sensor” (as per claims 50, 72, 75 and 81) is capable of capturing at least thirty frames per second (as per claim 58), “a processor configured to generate a signal usable to drive a display” (as per claim 57), and “a signal processor” (as per claim 72) has not been clearly set forth. It is noted that the “digital to analog *converter* 45” cannot be interpreted as the signal *processor* as claimed.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 24-26 and 49-92 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation therein can be unclear and confusing. It is noted that without the structural elements of the display, the computing device, and the housing enabling insertion of elongate medical tools into the practice volume to perform a training exercise cannot perform the function for practice of videoendoscopic surgery techniques as claimed (as per claims 24-26, 49-55, 58-61, 63-65, 67-75, 77-79 and 81-92). In addition, it is not understood as to what is the meaning of “the elongate member movably supporting the digital video camera externally of the elongate member” (as per claim 24). Further, the reference for “a digital imaging sensor” (as per claims 50, 72, 75 and 81) is capable of capturing at least thirty frames per second (as per claim 58), “a processor configured to generate a signal usable to drive a display” (as per claim 57) and “a signal processor” (as per claims 72 and 75) are unclear. Furthermore, claims 56, 62, 66, 76 and 80 are rejected for incorporating the above errors from their respective parent claims by dependency.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 24-26, 49-56, 60-62, 64-70, 73, 74, 76, 77, 81-86, 88, 89 and 92 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hasson (U.S. Pat. No. 5,947,743). The broadly

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claimed structure can be interpreted as the apparatus for training for the performance of a medical procedure of Hasson. Figs. 1-23 of Hasson broadly discloses the videoendoscopic surgery trainer and method for the practice of videoendoscopic surgery techniques comprising the housing (12, 302) defining a practice volume, the digital video camera (146), which is substantially larger than a incision that would be required to inserted a laparoscope into a body of a patient, supported by a distal end of the elongate member/boom inside the practice volume, such that manually changing a position of the proximal end which is disposed outside of the practice volume results slight in a change in a position of the digital video camera (i.e. panning or titling motion), the support structure (136, 144, 326, 328, 330) having the bracket for providing the variable sliding or locking (i.e. the turning knob) position of the elongate member, and the display (148) for displaying the images captured by the digital video camera, wherein the proximal end of the elongate member configured to simulated the elongate medical tools, such as endoscope or laparoscope.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 57-59, 71, 72, 75, 78- 80, 87, 90 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasson (U.S. Pat. No. 5,947,743) in view of Hon (U.S. Pat. No. 6,074,213). It is noted that the teaching of Hasson does not specifically disclose the computing device (as per claims 79 and 80) having the processor (as per claims 57, 72, 75 and 80) and memory (as per claims 79, 80 and 91) or the non-volatile memory medium (as per claim 78), and the web camera (as per claims 59 and 71), and the network (as per claims 87 and 90) as required. However, the teaching of Hon broadly discloses that such features of the computing device (3, 8, 15) having the processor and memory (64) or the non-volatile memory medium (9), and the web camera and the network (see Figs. 10-17) are old and well known. Hence, it would have been obvious to one of ordinary skill in the art to modify the system and method of Hasson with the features of the computer having the processor, memory or non-volatile memory and web camera, and the network as taught by Hon as both Hasson and Hon are directed to the system and method, so as to provide the practicing of the videoendoscopic surgical techniques. Moreover, it is also noted that the teachings of Hasson and Hon do not explicitly disclose that the digital imaging sensor is capable of capturing at least thirty frames per second (as per claim 58) as required. However, such limitations of using the capturing speed of at least thirty frames per second is old and well known and is considered an arbitrary obvious design choice, so as to provide the images of the videoendoscopic surgery techniques.

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10. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasson (U.S. Pat. No. 5,947,743) in view of Irion et al (U.S. Pat. No. 6,902,405 B2). It is noted that the teaching of Hasson does not specifically disclose the ball head as required. However, the teaching of Irion et al broadly discloses that such feature of the support structure includes at least one ball head (24) that enables the endoscope to pan and tilt. Hence, it would have been obvious to one of ordinary skill in the art to modify the system and method of Hasson with the features of the ball head as taught by Irion et al as both Hasson and Irion et al are directed to the system and method, so as to provide the pan and tilt movement for practicing the videoendoscopic surgical techniques.

Conclusion

11. It appears that applicant is claiming more than one independent and distinct invention. Under 37 C.F.R. §1.142, the requirement for restriction may be required in the future action. Further, the prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hon (U.S. pat. 4,907,973) teaches the expert system simulator for modeling realistic internal environments and performance in which a person interacting with the system to interject information to establish non-restricted environmental modeling of the realities of surrogate conditions to be encountered with invasive or semi-invasive procedures. This is accomplished by video display of simulated internal conditions that appear life-like and the monitored data. Medina (U.S. Pat. No. 5,368,487) discloses the device for assisting in the training of laparoscopic surgical techniques which provides a relatively simple transportable device that allows a physician to practice laparoscopic surgical techniques without the need for assistance or

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complicated surgical set-ups. Tuason (U.S. Pat. No. 5,403,191) discloses the laparoscopic surgery simulator and method of use for an individual user to practice endoscopic surgical procedures by duplicating the operative steps performed on actual true to life condition for the purpose of learning the art and constantly improving the skill of eye-hand coordination and manual dexterity. Younker (U.S. Pat. No. 5,620,326) teaches the anatomical simulator system having a synthetic anatomical torso including an internal cavity and a pneumoperitoneum wall resting on a base. A selected one of a variety of procedure packs is placed inside the cavity for use in training in videoendoscopic surgical techniques. The torso includes a plurality of trocar apertures for permitting insertion of videoendoscopic instruments for manipulation, incision, dissection and suturing of synthetic anatomic structure included in the procedure packs. Bailey (U.S. Pat. No. 5,800,179) discloses the system for training persons to perform minimally invasive surgical procedures. Hasson (U.S. Pat. No. 5,873,732) discloses the apparatus for training for the performance of a medical procedure. Hon (U.S. Pat. No. 6,003,395) teaches the selectable instruments with homing devices for haptic virtual reality medical simulation by using selectable instruments in virtual medical simulations with input devices actuated by user and resembling medical instruments which transmit various identifying data to the virtual computer model from the instruments which have been selected, and assisting to create full immersion for the user in the virtual reality model by tracking and homing to instruments with haptic, or force feedback generating, receptacles with the instruments dock by means of a numerical grid, creating a seamless interface of instrument selection and use in the virtual reality anatomy. Cunningham et al (U.S. Pat. No. 6,470,302 B1) discloses the interface device and method for interfacing instruments to vascular access simulation system. Goldstein (U.S. Pat. No. 6,485,308

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B1) teaches the training aid for needle biopsy of the human breast to enable a trainee to learn to locate modeled internal lesions and similar tissues in the breast. Gregorio et al (U.S. Pub. No. 2003/0068607 A1) and Rosenberg (U.S. Pat. No. 6,654,000 B2) disclose the interface apparatus with cable-driven force feedback and four grounded actuator to provide physically realistic computer simulation of medical procedures. Shun (U.S. Pub No. 2004/0033476 A1) teaches the laparoscopic trainer for practicing the surgical techniques. Fisher et al (U.S. Pat. No. 6,863,536 B1) teaches the endoscopic tutorial system for simulating a medical procedure performed on a simulated subject. Lacey et al (U.S. Pub. No. 2005/0084833 A1) discloses the surgical training simulator having a body form apparatus with a skin-like panel through which laparoscopic instruments are inserted. Camera capture video images of the internal movement of the instruments and a computer process them. Cotin et al (U.S. Pub. No. 2005/0142525 A1) teaches the surgical training system for laparoscopic procedures having the tracking system for tracking the instrument position during the training procedure, comparing the instrument position information with the expert group to generate standardized scores and provide realistic haptic feedback during the training procedures. Szinicz (European Pat. No. 0 624 861 A2) discloses the surgical training and method for conducting surgical techniques on the simulated apparatus. Jacobus et al (World Pat. No. WO 95/02233) discloses the method and system for simulating medical procedures including virtual reality and control method and system for use therein. Chung et al (World Pat. No. WO 2005/083653 A1) teaches the laparoscopic surgery training device with adjustable instrument placement for simulating laparoscopic surgical procedures.

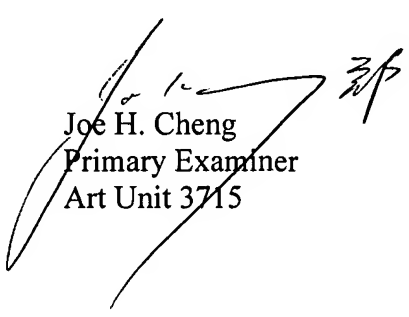
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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe H. Cheng whose telephone number is (571)272-4433. The examiner can normally be reached on Tue. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on (571)272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joe H. Cheng
February 17, 2006



Joe H. Cheng
Primary Examiner
Art Unit 3715